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A N
E S S A Y
O N
I N O C U L A T I O N,

Occasioned by the SMALL-POX being
brought into South Carolina in the
Year 1738.

— *Servare modum* -----
— *Et non incauta futuri.*

HOR.

WITH AN
A P P E N D I X,

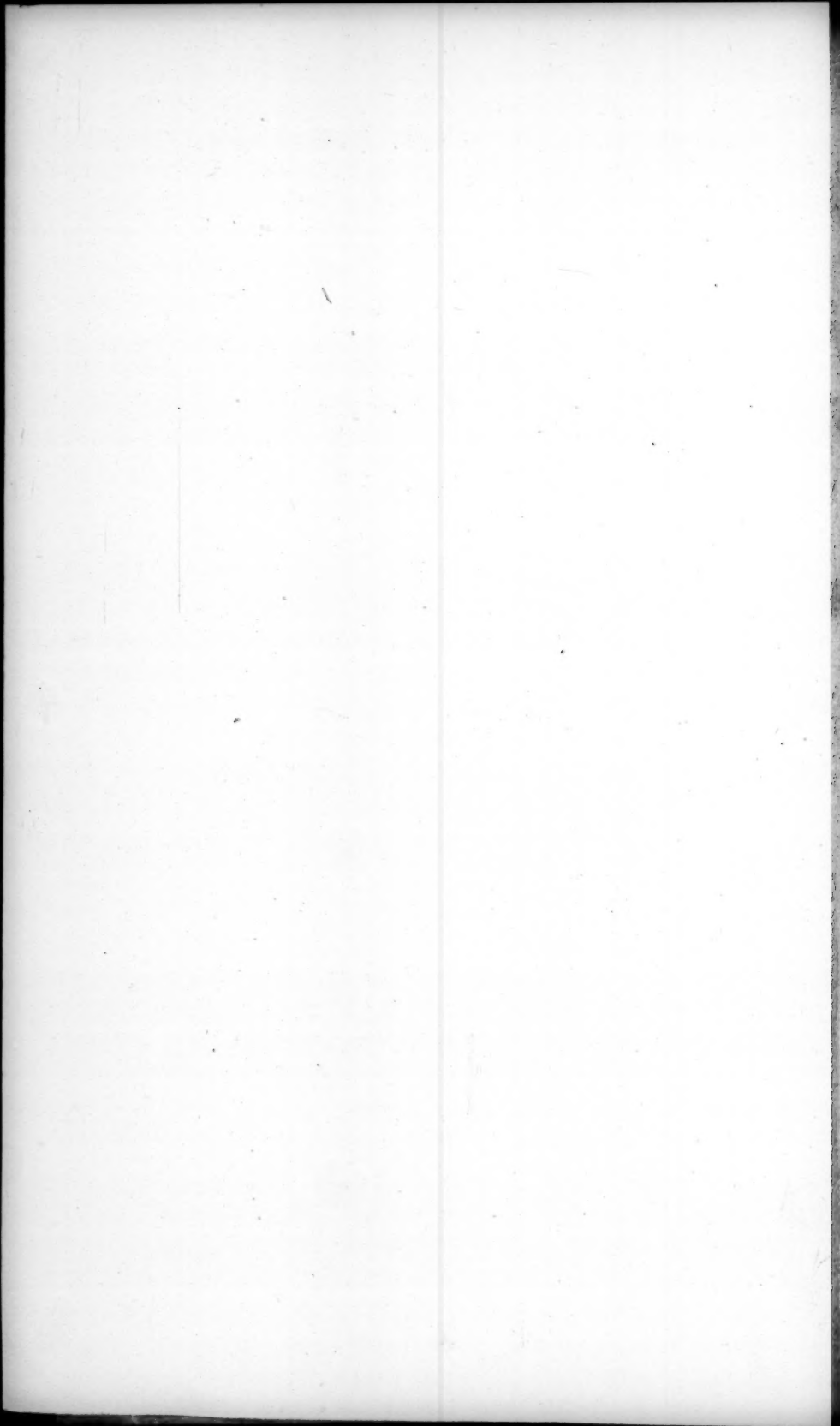
Containing a faithful Account of its Event
there; where Eight only died out of above
800 inoculated; and a summary Relation
of the principal Cases.

----- *Oculis subjecta fidelibus* ----- HOR.

By J. KILPATRICK. K

L O N D O N:

Printed for J. HUGGONSON in *Sword and*
Buckler-Court, Ludgate-Hill,
M D C C X L I I I.





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ESSAY

ON

INOCULATION.

Price One Shilling.



AN ESSAY ON INOCULATION

Occasioned by the Small-Pox being
brought into South Carolina in the
Year 1738.

By J. KILPATRICK, M.D.
F.R.S.



Containing a list of the Names of its Members
there; where Right only died out of above
800 inoculated; and a summary Relation
of the principal Cases.

Printed by J. KILPATRICK, M.D.

By J. KILPATRICK, M.D.

LONDON:

Printed for J. HUGGONSON in Strand and
Bucklers Court, Ludgate Hill.
MDCCLXXXVIII.

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P R E F A C E.

 H E extensive Importance of this Subject, and the very Duty of every Person of the Profession, to contribute the best Information he has attained upon it, might seem a sufficient Apology for the Publication of these Sheets, or rather a sufficient Reason to render any one superfluous. Till the Method treated of be generally established, or entirely exploded, the Invitations of the learned and accurate Dr. *Jurin* cannot be obsolete. And further, as the most judicious * Opposers of Inoculation, after all their learned Reasons and Suppositions against it, seem yet very rationally to wish for *fuller Evidence*, to conclude them on a Point of such general Moment; and have declared, that whenever the good Effects, contrary to their Apprehensions of it, should be demonstrated by *Experience*, they would very readily even promote the Method; it is no mean Incitement to the Compiler of these small Tracts to reflect, that the many Instances of it he has seen and experienced,

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* See Dr. *Wagstaffe*, *Blackmore*, &c.

may possibly add some little Light to the Matter ; which, furnishing many with a rational Occasion of exerting their Candor, may terminate in the Security of Multitudes.

I AM not insensible, that some Things, which I must despair of equalling, have been produced on this Subject; tho' perhaps few by any Person, who has been Witness to more of it. And I have the same common Liberty of publishing my Sentiments, which any other has of neglecting or condemning them. But to proceed ; It appears to me, that if any thing beside a farther Experience was necessary to a general Establishment or Extermination of this Practice, it was oftner owing to the Immoderation than Inability of the Disputants: Some early Practisers of the Method attributing a compleat Infalibility to it, and continually straining to conceal its Miscarriages, or to deduce them from different Fountains. This unfair Conduct of the first Operators was but too naturally considered as the Effects of a stricter Devotion to Lucre than Truth ; and has sometimes produced as excessive a Zeal in its Opponents, who have not been wanting to exaggerate its few ill Consequences, and

and to attack it with many Objections; some, tho' seemingly pertinent, which have been dissipated by a Multitude of Facts; and others, more minute and perplex'd, than masculine or material. Thus as the Practice has been generally rather the Subject of a physical *Contention* than Enquiry, 'tis the less strange, if we are still divided about a Point, that had been clogg'd with less Obscurity, if it had been examined on all Sides with greater Candour. Had every one proceeded as rationally and equitably on this Occasion as Dr. *Jurin*, and a few others, all pertinent physical Controversy, or Doubt about it, must have been extinguished ere this Time.

If the worthy Gentlemen of the Faculty generally subscribe to the ingenious Dr. *Wagstaffe's* Sentiments of this Disease, viz. *That there is one Sort in which a Nurse cannot kill, and another, of which a Physician cannot cure*, it must deserve their serious Attention; whether, upon a Supposition of the Truth of the following Relation, it is not highly probable, at least, that Inoculation is frequently preventive of the worst Sort. It will be evident from the Essay, that by Inoculation I do not mean the little Operation abstractedly, but

celebrated by the Advice and Direction of a competent Physician, who may judge of the different Preparation appropriate to different Habits and Temperaments, and discern where any may, under certain Circumstances, be improper or needless. And as this evidently requires a Sagacity to distinguish the Diversities of Constitution, and a Knowledge of the Subjects general Manner of Life ; so undoubtedly in this Case, as *Celsus* says, in general, the Physician, longest acquainted with the Subject and the Family, must be, *cæteris paribus*, the properest Adviser and Conductor of it. Dr. *Wagstaffe's* Opinion, *That the English Blood must be peculiarly rich from their Diet*, is highly probable ; and his Inference from it, *that such an indiscriminate Use of Inoculation as prevails in the East, is likely to fail oftener here than among them*, is not less rational. But certainly, at the same Time, if he had thought fit to mention it, it must have been esteem'd as cogent an Argument, for administering the mildest Infection to *such* Bodies, after a judicious Preparation. The Method I am convinc'd must deserve a general Imitation, but I think there can be but little Prudence, whatever Faith or Courage there may be, in enterprizing it under the Auspices of old Women,

Women, of whatever Sex, Age, or Profession.

WHEN I confess my Apprehension, that some of its worst Events here and abroad, may have been owing to an over crude, and unguarded Application of it, I do not think my self partial to the Method; for the very Profession of some of the earliest Infusers here, did not promise above a collateral Tincture of physical Knowledge: And their too general and undistinguishing Applause and Administration of it, were no very pregnant Examples of great Prudence or Ability. But surely there must be a wide Distinction between the Use and Abuse of any thing; they differ only *totò* *cælo*, and the ill Consequences of the last will never determine a reflecting Being against the first.

SOME Readers who are just to my Veracity in the *Appendix*, may still esteem the Facts inconclusive *here*, from the Difference of Climate, and other Circumstances they occurred in: My chief Reply to this is, *Valeant quantum debent*. 'Tis my Desire they should avail no farther than they ought, as well as that they should avail as far. Some Differences very probably

bably there are; and to consider them briefly ;

THE Months of *June* and *July*, which comprized all the Mortality and Danger that happened to the Inoculated in *Carolina*, were undoubtedly much hotter than the same Months can naturally be in *England*; under which excessive Temperature; had Books been silent, Experience would have shewn the natural Distemper to rage with the most dreadful Mortality. So that I conceive the Circumstance of *Climate* must have been in Favour of *this*, at that Season, and the Deceased have enjoyed a better Chance *here*. Indeed at other Seasons, that Climate may be full as proper for it, and in Winter, I believe, generally more so: For very severe Cold rendering the Vessels more rigid, the Surface more thick and close, and probably the very Blood more compact, will make Expulsion more difficult. And notwithstanding a rapid Eruption is generally an unpromising *Phænomenon*, as it is often a copious one, resulting from a copious Assimilation; yet, on the other hand, if it is delayed beyond a due Term, by any external Resistance or Accident, the Consequence may probably prove a Determination of the heterogeneous

terogeneous infected Particles, to some internal vital Part, which resists less. But after all, it is certainly more practicable to keep a Chamber duly warm in Winter, than to attemperate the excessive Heats of the Summer Months in *Carolina*. Besides, the Putrescence attending this Disease being sensibly aggravated by vehement Heat, and rather restrained by Cold, the Inconveniencies of an excessive Winter will come very short of those from an extreme and contrary Intemperature. In brief, *ceteris paribus*, it is probable there will be, at that Season, a gentler Assimilation.

WITH REGARD to the Diet of the Inhabitants of *Carolina*, they feed as near the Manner of the *English*, as their Country, which is plentiful, will allow. But they drink much less strong, heavy, viscous Malt Liquors, substituting for such, thin, acid and very weak Punch, or Water and Wine, and are indeed, upon the whole, rather temperate than otherwise. To which we may add, that as they are commonly less robust, and more relax'd than *Britons*, they might, on that Account, be less violently attacked with inflammatory Disorders, if their Climate were not frequently obnoxious to such. So that their Diet and Tone

of

of Body seem to me rather in their Favour, with Regard to this Malady; tho' it is certain, all such Advantages were more than counterbalanced by the unhappy Season it prevailed in.

UPON the whole, I am apt to think, that with proper Conduct, the Difference will not be very considerable. I have seen but two in *England* under the Method, the Son and Daughter of Mr. Francis Yonge in *Masbam-street, Westminster*, who formerly lived several Years in *Carolina*; and who have recovered from as favourable a Disease, as his Affection could have wished them. It is demonstrated by Dr. *Scheuchzer's* Calculations, that from the Year 1721 to 1728 inclusive, one twelfth Part of the Deaths within the Bills of Mortality were owing to the Small-pox; and there was certainly not above the one hundredth Part of the Inoculated died in *Carolina*, and that during the utmost Rage of the natural Distemper. Had the Advantage been sensibly less, methinks every Lover of his Species must have thought it worthy his own and the publick Attention. To that therefore, and to those whose Studies are properly devoted to the Preservation of Life and Health, the following Pages are submitted with sincere Good-will, and particular Defe-
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AN
E S S A Y
ON
INOCULATION.



AS the Small-Pox, lately imported here, spreads and rages considerably at present, the Practice of Inoculation has of course become an ordinary Topic of Conversation. The Altercations of different Persons about it have risen to a very ridiculous Rancour, and most of the Gentlemen who practise Physic oppose the Method. Undoubtedly all who approve or reject it, furnish themselves with Reasons for their Conduct; and there are not wanting People of Reflection and Principle, who entertain very opposite Sentiments about it: Tho' methinks the bitter Censures pronounced by some, on those who use the Method, can neither be very genteel nor charitable; since undoubtedly a conscientious Regard for their Families, and a Concern for their Interest are the common Motives that affect both.

At such a Juncture I imagin'd the Public might probably pardon the Presumption of a
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short Essay upon the Subject, from one who has really thought of it with some Attention : To how much Purpose, is of course submitted to every Reader ; but the Writer's Intention in the Publication, and his sincere Endeavour to abstract himself from all Opinion and Prejudice, and to be affected only by Truth, Reason and Evidence on this important Occasion, are Circumstances of real Satisfaction to himself, and independant of the Reception his Attempt may meet with from the Community.

If every Person, who may be supposed liable to this Distemper, could have a well-founded Assurance of receiving, by natural Infection, a distinct, benign Pock, there is little Doubt but Inoculation would quickly be neglected ; as it is certain, that the Frequency and Fatality of the confluent kind have been the principal Inducements to the Practice of it. The distinct Sort, naturally taken, has often been of such a mild Character, that it were impossible for Inoculation to have introduc'd it more favourably. And indeed when this is the Case, a temperate *Regimen*, good Attendance, and very little Physic seem the only Requisites ; the principal Error here lying generally in doing rather too much, and multiplying the Pocks, by an over-warm Assiduity of *keeping them from the Heart*, as the Phrase is : So that the greatest Danger, in this gentlest Degree of the Disease, may sometimes consist in an officious Attempt to cure it.

BUT as it is impossible to have any very certain Assurance of receiving the natural Infection

tion in this favourable Measure (tho' one may have better Reasons than another for such an Expectation) it is no Wonder if the natural Horror of Death, and a Desire to avoid the Trouble and Loathsomeness of the severer Degrees of this Disease, have concurred to dispose many to the Use of Inoculation. And indeed if we can prevail with ourselves to reflect freely in this Case, we shall soon be obliged to admit, that nothing but the real Success of this Method could ever have continued it to this Time. The Novelty of seeking Security from a Distemper, by rushing into the Embraces of it, could naturally have very little Tendency to procure it a good Reception on its first Appearance. The Persons who first ventured to exercise it, or to become the Subjects of it, must have something like a Conviction of its good Effects, before the one could be prevailed on to risque his Character and Fortune in communicating, or the other his Health in receiving it: And it is impossible, in the very Nature and Reason of Things, but that a very few Miscarriages under it at first must have restrained the Progress of it effectually.

I AM sensible that among the Patrons of this Practice, some have been such Bigots to it, as to affirm, that no one ever died by an artificial Infection, and that none have been very roughly handled by it: While others, with more Ingenuity, and more Prudence too, confess that the Inoculated have sometimes, tho' rarely miscarry'd; and in a few Instances been pretty severely infected. In endeavouring to account for the Causes of such ill Events, it is

evident they omit no Pains to acquit the Practice itself, and generally charge the Fatality to a natural Infection received before, or to the Patient's irregular Conduct during the Term of Preparation, or after Infusion had taken Place. The Existence of the first of these Causes is more easily suggested than proved; but the Behaviour of a Patient being a Circumstance more capable of Demonstration, as often as this appears to have been very improper and unadvised, I cannot see how Inoculation can be justly accountable for the ill Consequences: For I believe it will readily be admitted by every judicious Approver of Inoculation, that such a Conduct might be instituted, both before and after it, as would be likely to produce a very violent Pock, tho' it might have been taken from a very mild one. But as this Essay is rather a Search after some particular Truths, than a direct Impeachment of, or Persuasive to any particular Conduct with regard to the Small-Pox, I shall suppose, that all who have died in this Disease after Inoculation, have sunk under the actual Severity of the Infection it introduced. The greatest Proportion of Miscarriages by Inoculation that I have heard or read of, was one in thirty, when the natural Distemper carryed off one in five. In *Boston* nine hundred died out of five thousand that were naturally infected, and six out of three hundred that were inoculated. In other Places and at other Times it is affirmed not to have failed once in some hundred Instances; at which time it is probable, the natural Disease must have been of a very mild Disposition. By the Account of an accurate Physician

Physician in the North of *England*, the Small-Pox carried off in several Towns and Parishes there, upon an Allegation, twenty two in a hundred: He observes indeed, that at that Season it raged with more than ordinary Vehemence. But by a pretty exact Calculation, it is affirmed upon a *Medium* to kill, at the least, two in thirteen; so that comparing the greatest Mortality by Inoculation, to the ordinary Number of Deaths in the natural Way, the Difference is easily found.

THE World, learned and unlearned, have been however not a little divided about this Practice; and tho' this Difference in a great measure still subsists, 'tis pretty observable, that the physical Objections to it are generally thought less forcible than the moral Difficulties about it. The physical Considerations of the Subject having chiefly employ'd my Attention, I shall endeavour to present them to the Reader, exactly as they occur'd to my Reflection and Reading on this Occasion. And this I can truly say, I should be glad to have seen effected by a much better Hand; tho' after all that cou'd be offer'd hypothetically on either Side, it is plain, that all the Unprejudic'd must be concluded, as Facts and Evidence should determine them at last.

THE first Cause of this Disease, as well as of many others, lying without the Compass of our limited Understandings, it is clear, that our best Reasonings upon it must be taken from Observations on the common Appearances of the Distemper itself, from the general

ral Effect of Remedies, and Event of the Symptoms.

EXPERIENCE therefore having taught us, that crude, full and vigorous Bodies, and such as have been accustomed to a free or inflammatory Way of Living, were generally affected with a more intense Degree of the Distemper, Inoculation pretends to the Advantage of singling the proper Objects, for a peculiar Manner of Infection to operate mildly upon, as well as to a Power, by a Conduct previous to that Infection, to render them, in a great measure, such. Every one must observe here, that in saying this of Inoculation, I do not confine myself to the mere Circumstances of scratching one or more little Issues in some Part of the Body, and conveying a little of the variolous Matter into them; the common Practice of Women in *Turkey*, and Negroes in *Africa*; and which indeed it is harder to say who cannot perform, than who can: But that by Inoculation, I mean a Power of discovering a fit Body, or disposing one, judiciously, to receive the most favourable Species of the Small-Pox by Infusion, joined to a Skill of obviating, or remedying the most unexpected ill Accidents, that may possibly supervene, in the Course of the Disease itself. This Definition evidently requires a general Knowledge of the Principles of Physic, and the particular Nature of this Disease; an Acquaintance with the Force of Remedies, commonly call'd a Knowledge of the *Materia Medica*, as well as a considerable Sagacity in discerning the particular Habits of different Bodies, in the Person who exercises Inoculation.

Inoculation. Different Bodies will necessarily require different Degrees and Modes of Evacuation: Some may be prepared most effectually by alterative Medicines, and such gentle Evacuants as are eminently so: Many will need no Evacuation or Preparation at all: And it is even possible that a few who are determined to be inoculated, may, instead of Physic, actually want a better Plight of Body than they enjoy, to become proper Objects of it. Children *with us* should generally use some good Worm-Purges before-hand, lest the Distemper should be increased or perplex'd by the Accession of a Worm-Fever. People of adult Years, rigid Fibres, thick Skins, and dense heavy Fluids, will require a careful and appropriate Preparation; but the most general Indications must be, to allay any inflammatory Disposition, and evacuate any *excessive* Plenitude of the Humours, with as little Diminution of the vital Strength as may be. But here I may be asked, since this Foresight or Preparation seems of such Consequence towards the Success of Inoculation, Why may not a Person thus happily disposed, whether by Art or Nature, throw himself into the Way of being infected by the gentlest Pock he can meet with? To which I answer, That if such a one has absolutely determined against the Operation, and yet can without Scruple *endeavour* for a natural Infection, it is possible he may do well: But if he is only in suspense, and having a farther Curiosity, is complaisant enough to consider even my Sentiments on the Occasion, I shall observe to him, first, That it is very possible he may not be infected when he desires it,

it, as the Disease has not till very lately appear'd to be epidemical with us, nor even greatly contagious; and Eruption has generally happened somewhat later than usual, from Inoculation itself; so that he might lose the Benefit of his present happy Disposition for the Distemper by many natural Accidents; especially if Medicine had any considerable Share in procuring it; and he might afterwards receive the Infection when he was very unfit for it; and at a Season, when the Disease itself might prove of a severer kind. Secondly, It may be worth considering, that Infection, in the natural way, is generally taken in by Inspiration, where the Lungs may receive an early ill Impression; or by the Smell, whence the Brain and Nerves may be immediately disorder'd from the first Assaults of the variolous *Effluvia*; for where they are inhaled through the external Pores (which can scarcely happen so often as by the Breath or Smell in the natural way) it is reasonable to expect a milder Infection, as they are admitted into the Road of Circulation, without a previous Attack on any noble Organ: And indeed this last Manner of receiving the Pock has the nearest Affinity of any to the artificial Insertion of it; or is truly much the same with the Method related by Dr. Perrott Williams, of communicating the Disease in *Wales*, by rubbing some Pustules (*which must be purchased it seems*) hard upon the naked Arm or Leg. This Custom is affirm'd to be as successful as Inoculation itself; tho' the Hazard of a natural Infection by the Smell, or Breath, seems less avoidable by this Manner; neither can

can such an external Derivation be so reasonably expected, where there is no Issue or Ulcer. And certainly every reflecting Person, who scruples Inoculation, must account all voluntary Methods of embracing the Distemper equally presumptuous.

If there be any thing material as to the Quantity of Infection, or Number of *Miasmata* received, that Circumstance seems truly incapable of any Regulation, but by Infusion, where the smallest Moisture is generally sufficient. But after all, an essential Difference will consist in this, that Infection in the natural Way, by whatever Parts it is received, is effected by the most volatile and active Emanations of the Distemper, which, like the fiery and corroding Parts of Liquors, first ascend in Distillation; and that Inoculation is effected by the milder and less active Principles, which, like the more phlegmatic Parts, are longer coming over; but which however, under the Vehicle of *Pus*, or Matter, contain a Venom of Energy sufficient, in a suitable *Nidus*, to propagate a Disease of its own kind. And this Consideration may serve as some Motive for preferring the latest Pocks on the Extremities to inoculate with; though 'tis like such a Reason may be of no extraordinary Importance; since undoubtedly the Habit of Body on which, and the Season of the Year when the Operation is perform'd, are the Circumstances which merit our principal Attention. But that the peculiar Virulence of some Poisons may consist in their most volatile Parts is manifest, from the Effect of many chymical

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Fumes,

which leave the remaining Mass but medicinal and sanative; and from the Attempts that have been made to poison by the Smell only. And that the Vehicles of Poisons may become less acrid and venomous in Time, from the Exhalation of particular Particles, is evident from the Juice of the *Cassada* Root, which being certain and instantaneous Death, upon its first Expression, becomes insipid and innocent in a few Days: This I have been assured of by a Gentleman of good Sense and Integrity from *Barbadoes*; besides, the great Consumption of the Root for Bread is a collateral Illustration of it.

To reason yet a little further from Analogy, which is all we are able to do on many Subjects, it is observable, that the very Steams, in drawing off a Parcel of strong Spirits, are often attended with a more sensible Effect, than taking in a reasonable Measure of them, in any diluting Mixture. Those Spirits themselves grow softer, and even less hurtful from Age and Air; for if they are kept closely stopt in Vessels that prevent a Transpiration of their more fiery Parts, they kindle in some time to Violence, and, for want of sufficient Space to expand in, break with a sensible Explosion thro' the Glass that imprisons them. It seems not very improbable, that the secondary Fever, which occurs in the confluent Pock, when it is scabb'd, may also be owing to a Retention of some variolous Steams, which having less Minuteness and Volatility than those which first transpired, and meeting with a greater Obstruction to their Passage from the incrustated Surface, are, by that superior Resistance, re-
turn'd

turn'd into the Circulation, where they renew the Fever, which is only a Luctation of Nature to free herself from Particles, whether putrid or variolous, whose Residence is incompatible with the Order of the animal Œconomy, or Safety of the Machine itself. If it were needful to evince this, it must be considered, that the Matter which is taken about the Time of scabbing for Inoculation, must contain the Principles of the Disease which effected it, and which it could not otherwise impart. And Dr. Mead relates a Case of his own Knowledge, where there was a third Succession of Pustules, the Distemper not being fully terminated till about the thirtieth Day. A smaller *Specimen* or two of the like Recrudescence of it has occur'd even to my little Observation.

It is said that a very distinct kind is ever the Consequence of Inoculation, and I must confess it has happen'd such to all the Inoculated but one, that I have as yet seen. This must undoubtedly prevent some Mortality, and a great deal of Hazard and Trouble, by keeping off the secondary Fever, which depends entirely, under a proper *Regimen*, on the Confluence or Multitude of the Pustules; and which kills a vast Majority of those who die by the Small-Pocks.

It is objected to Inoculation, that it does not always convey a Pock, and where it fails, that the Person is ever after liable to Eruption, and many other Disorders from impure Juices. To speak impartially, as I have seriously determin'd to do on this Occasion, I believe some

Failures of this kind have happen'd ; but the same Impartiality obliges me to confess my Opinion, that they have happen'd very rarely. There is a Case publish'd of a Lady who was inoculated, upon whom the Pock did not appear till eleven Weeks afterwards ; during which Interval she was troubled with Flushings and Restlessness, but never confined, till at length Eruption happen'd while she was at the Play-house, which, proceeding happily, terminated her former Complaints. In this Case it was controverted whether she did not receive a natural Infection, and indeed it is very difficult, if not impossible, to determine clearly about it.

As the natural Disease at first spread very slowly here, and as several who had a variolous Fever, and all the early Symptoms of Infection, recovered entirely without Eruption, by a remarkable sweating on the fourth or fifth Day ; it might seem reasonable to expect that Inoculation would not generally take Effect ; yet have I seen or heard but of one as yet, on whom it has been vainly celebrated ; tho' the ordinary Term of Eruption has been manifestly protracted with many, which is probably owing to the same Constitution of Air, that appeared not so greatly disposed, at first, to extend the natural Disease. The best way to prevent such Disorders, as may follow an ineffectual Infusion, seems to be continuing a good Discharge by the Incisions, till they appear very well disposed to heal ; and then to use some proper Sweetners and Evacuants, to correct and eradicate any grosser Remains in the

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Constitution. I had some Doubt at first, whether this Fever, seemingly variolous, tho' eruptive, might not have privileg'd the Patient from any future Infection of this Disease; but a few Months put an end to my Uncertainty, by presenting me some Patients under Eruption, whom I had attended in the former Fever, and who had a pretty severe Pock, tho' I do not remember that any of them failed under it.

BUT to return to this Objection of an ineffectual Infusion, we must, to be unprejudiced, acknowlege this Disappointment occurs but very rarely indeed: Besides, where it is ineffectual, it is often difficult to be certain whether the Person might not have it in his Infancy, or even in the Womb, so very gently, as to pass thro' it insensibly and without Observation, which may certainly happen. Not that I deny, or cannot conceive, that a Constitution here and there, one in ten thousand perhaps, may be privileged from this Disease by a peculiar Idiosyncrasy, which, I can further suppose, may be either perpetual or variably; and which may be demonstrated to have been variable sometimes. And very possibly most Constitutions are exempted from some one or more Diseases; tho' the same Particularity of Habit, that exempts them from one Indisposition, will make them more propense and liable to another of a different Nature. But if, for Argument's Sake, we admit Inoculation to be fruitless once in two hundred Instances, it will then remain with every impartial Reflector, to estimate the Force and Amount of that
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with other Objections to the Method, and to compare the whole candidly with the Advantages arising from it.

It has been also reported, that Persons, receiving the Distemper by Inoculation, are liable to the constitutional or contracted Infirmities of the Body the Pock was taken from. I say it has been reported, because if I had ever understood that it had been proved, or even countenanced by any Consequence, I should certainly relate it. But to admit the Possibility of this for Brevity's sake, it is evidently no Objection against the Practice, but a Caution as to the Habit the Pock is taken from. Something may perhaps depend on the Quality of the infus'd Matter, and every Operator will undoubtedly endeavour to infuse the least exceptionable on all Accounts; but there is certainly much more in the Disposition of Body into which, and the Season of the Year when it is infused. I can hardly think it is worth saying any thing to the vulgar Error of those being liable to a second Infection, who *have taken* the Pock by Inoculation: They are just as liable as those who have had it in the same Degree by the natural Way, and can be no more so.

As many Persons as incline to the Infusion may probably enquire, who are the properest Subjects of it. Here I think we may pretty certainly affirm, that it will differ in every Body, in a certain *Ratio*, from what the natural Disease would have proved in the same Body, at the same Season, and under the same physical

tical Circumstances. Thus Adults will, generally speaking, have a greater Erruption than Infants. For were we to chuse the fittest Subjects for the easiest Issue of the artificial Distemper, we should invert the Rules of Agriculture, by preferring a Soil that was not likely to furnish Matter for a fruitful Multiplication of the Seed. And, generally speaking, Children are so tenderly handled by this Disease, in respect of Adults, their Solids being more lax and distendible, and their Fluids more soft, and less pregnant with that inflammatory *Pabulum*, that is necessary, for certain, to the *Degree*, and probably to the *very Existence* of it, that some may think it no small Happiness, that this favourable Term of Life can be elected for the Malady. And yet it must be confess'd, that whenever this Season has been pretermitted, the same Observation seems to suggest the greater Necessity of it in Adults, from the greater Fatality of the Distemper in such Subjects. But undoubtedly here is an ampler Scope for Art and Judgment; and the Physician who ventures to advise it in very suspicious Habits, upon a very imminent Hazard of Infection, will need great native Sagacity, and a very assiduous Exertion of all his Art and Experience, to bring the Solids and Fluids into a proper Tone and *Crafsis* for a mild Disease.

I HAVE read of some Persons advising Inoculation to morbid Constitutions, not merely to introduce a favourable Pock, but also to better their Habit, and remove other Complaints. This indeed looks like a very unlimited Approbation of it; tho' I am able to conceive

conceive that pituitous, and very humid Habits, may possibly be corrected of such insalutary Excess, by such a Disease : Neither has it been ill observed, that most of the Methods by which we relieve or cure Diseases, seem themselves Imitations of other Distempers, as Diarrhæas, Choleræ, Hæmorrhages, colliquative Sweatings, Ulcers, &c. so that we may be more strictly said to commute, than to cure them, and cannot always commute effectually. How many Valetudinarians, Hyphochondriacs, and obstructed Persons do we see, whom, a regular Gout might have furnish'd with many comfortable Intervals of chearful Life ? This indeed we can no more certainly communicate than cure ; but when Nature has effected it, how frequently do we experience a real, tho' a sharp and painful Solution of other Complaints ? Yet assuredly, (notwithstanding a bare Propensity to some particular Disorders might not always forbid the Operation) it would be very ridiculous to inoculate for any other Purpose than a favourable Pock, some morbid Bodies having failed under it, and it being truly improper for most ; inasmuch, that Constitutions, evidently healthful before this Disease, often prove impure, or languid and hectic, after escaping through the confluent Degree ; the Blood, as *Willis* observes, not being deputed by its Effervescence from the variolous Poison, like Liquors from Yeast, but rather rendered fouler ; which is evident from the Necessity of greater Purgations in those, who have recovered from the highest Degree, and who must need the least, if it tended to a compleat Depuration of the Juices ; tho' we must admit
such

such a partial Defæcation of them, as privileges the Constitution from a future Infection of the same Kind. This I conceive to be the real Cause, why few or none are visited a second Time with the Small-Pocks; for an Alteration of the Skin and Pores by their necessary Distention from Eruption, which is the ingenious Dr. Drake's Conjecture, can scarcely be thought a sufficient Protection to those, who have had but a few and favourable Pustules, whom yet we see as effectually defended as others, whose Surface is very apparently alter'd. Neither should I be fond of recommending it to People of declining Years, as some have not scrupled to do, tho' probably it might succeed with many; for besides their being bad Subjects for this or any violent Distemper, methinks it seems odd to be very solicitous about a little remainder of the Day, when we are certain that Night *must* be approaching.

WITH REGARD to the properest Season for Inoculation, it seems very rational to conclude, that the artificial Disease will be mildest in the same Season of the Year, and under the same Constitution of Air, when the natural One is so. The Winter and Spring are the Seasons preferr'd in those Countries from whence the Practice was first imported. And certainly no physical, no rational Person would counsel the artificial Infection in a *Carolina Summer*, if there were a moderate Chance of avoiding a natural one. We should here again invert the Rules of Agriculture, and as we had before recommended a Soil naturally, or artificially poor for the Seed, we should also, when it is

left to our Choice, prefer a Season, in which it might be disposed to vegetate and increase but moderately. But here again it may be said, that where there is but little Probability of escaping the natural Infection, which is diffused with the quickest Progress, and greatest Mortality in Summer, is there not the greater Necessity for communicating the Infection in the mildest Manner we can; at so dangerous a Juncture? It may be added also, that infusing the Disease into easy Subjects, and under the most favourable Temperature of Air, tho' highly safe and prudent; seems yet less urgent and necessary, as we should have no very dreadful Apprehension of a natural Infection under such Circumstances; but that in Cases, where the worst may be rationally expected, no Advantage, in Favour of Life, should be overlook'd. We may observe here, that were Inoculation to prevail *very* generally, there would in a certain Term be few adult Subjects for it; for whenever the Matter was obtainable, Children would be inoculated, at the most favourable Term of Life for it: But as a Number of scrupulous People will probably, in spite of Consequences, prevent its becoming an universal Practice, it remains with the impartial and judicious to consider, whether adult Persons, within the Sphere of Infection in Summer, shall be more discreet in embracing the mildest Mode of it, or in trusting to their Chance of escaping it entirely, or for that Season. It must be acknowledged, that such Circumstances demand a very judicious Preparation, for which the Summer is not the best Season; and the Infection, generally raging most then, may not allow Time for a proper one. Indeed where

where Circumstances will permit, I should advise all Adults of a very suspicious Habit to retire very early from infected Places, especially in the Summer Months, which aggravate it vehemently in *this* Climate. But as a long Absence from Business must be inconvenient to many, and may be insuperable by some; and as we suppose Inoculation, where the Patient survives, will always vary in a certain *Ratio* from what the natural Disease would have proved under equal Circumstances; I must submit it, in such a Case, to the Person chiefly concerned, his Physician and Friends, to determine for themselves, and, as we say, to make the best of a bad Market.

To speak impartially, the Advantages of the Method hitherto have been too evident to admit of Debate; and so effectual to allay the Aversion which a great Majority *at first* expressed to it, that it is not improbable, we may have sufficient Instances of its Success or Fatality, before the Disease itself expires here, to determine the general Conduct of the Inhabitants of this Province, upon the next Visitation from it.

As I am a very indifferent Casuist, I shall not pretend to determine the Weight of those religious or moral Scruples, that disturb many worthy People on this Head. My exercising Inoculation Abroad and at Home sufficiently expresses my own Opinion of it, which I do not presume to impose on any one; tho' I cannot help *judging of the Tree by the Fruit, and approving the Morality, from the manifest Intention.* But whatever Action People conceive

as immoral or irreligious, tho' in itself indifferent or even good, seems a culpable Enterprize in such, as long as they judge it so. There is no doubt but a Parent must be very exquisitely afflicted to lose a Child by Inoculation, which may possibly happen: But if he lost three or four in the natural Way, while he saw this Method very generally successful Abroad, and never apply'd it at Home, I am apt to think, the more capable he was of reflecting on his Conduct, the less he would like to do it,

BUT with Regard to the Clamour of most Practitioners here against the Insertion, I would entreat the few of them, who are qualified for the honourable Profession of Physic by Art and Nature, to consider, whether the World may not mistake their Zeal against the Method, for personal Envy, and attribute all their Eloquence, in such a Case, to their repining at the sudden Employment and Success of Mr. *Mowbray*, the Gentleman who so lately introduced it. And as it has been said, that *where the Philosopher ends, the Physician begins*, it may be worth reflecting, how far such a Conduct may quadrate with the Character of Persons, who, in their Candor, as well as by their Intellects and Education, should be distinguish'd from the *great Vulgar, and the small*. To the rest, who may have luckily deceived themselves and others into an Opinion, that *they know*, I shall kindly recommend the Precept of *Pythagoras*, in this Debate; lest the repeated Tokens of their natural Shallowness and acquired Obscurity, should finally operate to their Disadvantage, with their discerning Admirers.

APPENDIX,



A P P E N D I X.

Tis evident from the preceding Essay, first printed in *South Carolina*, that it was wrote before the general Use of the Method it treats of; and while the Effects of it, tho' visibly advantrageous, yet being confin'd to a few, were, from that Circumstance, less convincing and demonstrative, than the very great Success, which finally silenc'd its loud-est Opposers.

I SHALL not dissemble the sincere Pleasure I received from the many Events so agreeable to my early Sentiments of Inoculation, and so favourable to a Province that has more Lands than Inhabitants to spare. And indeed I have the greatest moral Conviction, that the Lives of many were preserved by it, and that many more, who fail'd under the natural Infection, might have also been secured by a proper and timely Recourse to this. The few who con-
tinued

tinued invincibly possessed of its Immorality, and sunk under the Distemper, as it were, from Principle, satisfying their own Consciences, were accountable but to themselves, and if they were mistaken, they have also suffered. But Persons who amused others, or were amused by the pretendedly physical Objections to it, have either discovered a very superficial Knowledge of such Subjects, or behaved with too much Levity, for meer Opposition's sake, in a Matter of the last Importance to every Object of the Disease, and even to the Colony itself.

THERE were little Difficulty in reinforcing and extending the hypothetical Arguments adduced in the Essay, for the Preference of the artificial Disease; especially, where a Man might be but too apt to indulge and flourish on Suppositions, so advantageously countenanced by a Multitude of undoubted Facts. And tho' a candid physical Reader might readily forgive such an Amusement, within the Limits of Verisimilitude and Propriety, yet the peculiar Felicity of this Affair renders the most pertinent at least *unnecessary*; since, however the *Hypothesis* may err, the Practice proves itself. A salutary End, to which all our Reasonings of the first Merit must be strictly directed, is, humanly speaking, effected; nor can be effected without its Causes, whether we investigate them rightly or not. And we are sure to be much safer in merely arguing from Facts to Inferences, than in acting from Suppositions, to which we are often reduced, the most plausible and learned of
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which have sometimes proved fallacious and *imaginary* indeed. Besides, these being properly the Speculations of Gentlemen of the Faculty, are chiefly intelligible by themselves; while plain Events appeal to ordinary unletter'd Sense, they speak a universal Language, challenge a direct and natural Assent, and confound the most elaborate Trifling and Obstinacy.

If the many Things already published on this Subject, or my Inequality to a sufficient Pursuit of it, should make the Curious discover but *little new* in these Papers, yet their Publication may be useful, by reviving the Attention of many to a Practice, that must, undoubtedly, under proper Conduct, be of eminent Service to a Kingdom, that loses such Multitudes yearly by the Small-Pox. The Loss of a Lord *Petre* alone might incline every Lover of Humanity, every Admirer of curious Improvements, to lament that a Nobleman, in the genuine Sense of the Distinction, (whose Father is said to have died of the same Distemper, about the same Age) had not the Benefit of the securest Method of receiving it; when such a few escape it entirely here, and so many Adults fail under it in the natural Way. Besides, as the Numbers inoculated in *Charles-Town*, and the adjacent Parts of *South Carolina*, have exceeded the Numbers inoculated in any Part of the *British* Dominions, or of *Europe* itself, except the *Turkish*, in the same Space of Time, I cannot judge it improper to offer the Public an Account of the Consequences, which I believe no other Person intends to do; and
herein

herein I shall strictly endeavour to preserve the same unprejudiced Conduct I attempted in the Essay, which, being the justest, is the easiest also, as it must be more difficult to invent than relate. I shall specify every Mischance, ill Accident, or Defect that followed it, every Exception to its general Success, as far as they have come to my Knowledge. Nor is it reasonable to suppose, that any material one could escape a Person not very inquisitive on the Occasion, known to every one in Town, and most others: For when we consider how warmly this Practice was opposed and controverted, it is but too probable, that every Promoter of it, especially every physical one, was fully informed of, if not reproached, with its minutest ill Consequence. And to suppress or disguise any Circumstance on a Subject of this Importance, can scarcely be weak, but worse.

PERHAPS it might not be very material to premise, that the Small-Pox was imported into *South-Carolina* early in the Year 1738; or that they endeavour with great Caution to prevent the Invasion of that, and other mortally contagious Diseases, by appointing some Physician to visit all Ships from *Africa* at least; and by requiring an Oath from all Masters of such Ships, that they are, and have been free from such Distempers on the Voyage. Yet wherever the Error or Fraud might be on this unhappy Occasion, it was then introduced by a Ship with Slaves from some Part of *Africa*. The Ship, I think, arriv'd some time in *February* or *March*; neither did the Distemper appear

appear to spread with any extreme Rapidity, or unusual Vehemence during those Months, or even in *April*, and the Beginning of *May*; while the Weather continued but moderately hot; especially if we consider the numerous Objects of it, who must have sprung up in the many Years, wherein the Province, with one inconsiderable Exception, was free from it. For 14 or 15 Years ago, it had been imported, but by the great public Care to prevent its Diffusion, there were but one, or two Persons at most, who then died of it; and I believe it had scarcely seized ten, when it was entirely extinguished for that time. This Occurrence excepted, I am persuaded it had not been there in much less than 30 Years before, I am positive not in twenty and upwards. While no extraordinary Mortality ensued in the Months already mentioned, People who inclined to Inoculation were censur'd by some, as forward to extend the Infection, and no little Warmth succeeded their Altercations on the Subject. And I remember particularly, a Gentleman of the Profession, who was no early Admirer of it, told me, he thought it would be no ways necessary in a Climate, where we were so relaxed by the Heat, that a mild Disease must be the inevitable Consequence. Without pretending to contest it much, I only replied, we were not yet fairly entered upon our Heats (which are seldom violent there before *June*, tho' it's sensibly hotter, in general, than in *England* in the same Months) but that possibly the great Fervour of the Blood, in these Heats, might

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prevent our being remarkably the better for Relaxation.

BUT to digress no longer from the Design of this *Appendix*, tho' I have never understood that any Person kept a precise Account of the Number of the Inoculated, yet I have heard many Computations, and never knew any Estimate of less than a thousand inoculated Persons of different Colours, Ages, &c. There were indeed very great Numbers for the Quantity of People there, and the few Months in which it was celebrated. For being once begun, the Advantages were so undeniable, that a great Majority applied it in their Families, Ignorance, Prejudice, and Obstinacy itself being in a manner totally borne down and defeated by its irresistible Success. I shall, however, rather to come short than exceed, admit but 800 inoculated, which, as I have said, is considerably short of the lowest Estimate I have heard of; but it is certain, that of these, only six Whites, and two Negroes died; none before *June*, nor after the middle of *August*, in which Months, including *July*, the Disease raged with exceeding Mortality. I do not strictly remember the very Days either of their Inoculation or Decease, nor is it very material. They were as follow, viz. The Rev. Mr. *Basset*, Mr. *Sterland*, *John Harris*, Miss *Roche*, Miss *Perroneau*, a Girl at Mr. *Beal's*, besides a Negro Wench of Mrs. *Blakewey's*, and another of Mrs. *Hext's*. And tho' I shall not make the least Subtraction from the Debtor Side of Inoculation, for any Suspi-

Suspicious the Friends or Physicians of the Deceased might entertain of their previous natural Infection ; yet would it scarcely be consistent with the Impartiality I have professed, to omit a summary Account of the Cases and Constitutions of as many of them as have fallen in any Measure under my Notice ; which may also introduce a few passing Reflections, not inapposite to the present Subject.

MR. *Basset* was seemingly a very hale Gentleman, I believe about 40, or rather under, of a Complexion somewhat brown, of a middling Bulk and Habit, and inoculated during the great Heats, and Violence of the Disease, as they all were. As he sickened the third or fourth Day after the Operation, had an earlier and greater Eruption than most others under the Method, and finally died, the Necessity of a previous natural Infection was strongly contended for by Dr. *Dale*, who inoculated him, by the Admirers of Inoculation in general, and even supposed by the Patient himself. And tho' the Existence of such an Infection is neither mathematically, nor perhaps even physically demonstrable, nor disproveable ; yet methinks the Patrons of Inoculation assert more than they can easily support, in concluding, as many fondly did, that no Patient infected by Art alone sickens before the seventh Day. Dr. *le Duc* who was inoculated at *Constantinople*, and sickened the fourth, had a considerable Crop of the distinct kind, and attributes

butes the Disease to Art. And *Pylarini* says, that tho' Eruption ordinarily appears about the seventh Day, yet that it has sometimes happened on the first; which I must think very rare indeed. I believe it will be no bad general Conclusion, that the Term of sickening, from either Disease, approaches sooner or later, according to the Degree and Season of Assimilation; which is countenanced by the very late Eruption of some, who enjoyed a very mild Disease, particularly Miss *Mary Rbett*, whose Eruption, with very little sickening, did not appear, I think, before the 14th Day, which yet was supposed to be effected by Art; and who keeping up, at a small Distance from the Town, was the more likely to escape a natural Contagion. In the common Infection we observe the worst Pock to come out with the most violent Fever, and in the shortest Space after its Invasion: For this Assimilation being a peculiar Heterogeneity of the Blood, where it is very copious, will also be very sudden, and the Effects will proportionably stimulate, or even precipitate Nature to attempt that Separation of the infected Humours, which is necessary to purify the Mass for vital Purposes. Now that all Persons inoculated have the same Number of Pustules, or exactly the same Kind or Degree of Symptoms, I suppose no one will assert; and if not, it seems not very physical to assign a precise Term for the artificial Eruption; which, as one Consequence of Assimilation, will depend upon its Progress, as well as its Degree, and not appear, before its Cause is considerable enough

to give Nature some sensible Disturbance ; except in some very peculiar Constitutions, which *Sydenham* specifies. Thus, in the natural Disease, some have complained very quickly after an infectious Visit or Accident ; from whence we may generally predict a severe Attack ; and others not till seven or eight Days from the evident Term of Infection. This happened to a Gentleman of my Acquaintance in *Charles-Town*, who having kept out of it, for fear of the Disease in Summer, and entering a Room in the Fall, which some Slaves had lain down in, complained of a particular Stink, and immediately withdrew, but was taken down about eight Days after. A very plentiful *Hæmorrhage* that burst from his Nose, early in the Fever, abated a pretty smart *Lumbago* he was attacked with. Upon the ceasing of the *Hæmorrhage*, the *Lumbago* was a little exasperated. I bled him plentifully in the Foot, which greatly lessen'd it, and he passed thro' the Disease with much Ease and Tranquillity. But after all, we are obliged, by a considerable Majority of Instances, to admit the seventh or eighth Day to have been the most general Term of the artificial Invasion.

Mr. Sterland, I believe, was at least as old as *Mr. Basset*. He had always, during my Knowledge of him, an icteric Countenance, was often ailing, and seem'd to me like a Person of unsound or obstructed *Viscera*, tho' he never was under my Care. In short, I should by no means have recommended him to the Dis-

Disease, and I suppose it was entirely his own Determination. For unsound *Viscera* must naturally subject a Patient to internal Pustules, which, if not constantly fatal, must be commonly so. He did not sicken so early as Mr. *Basset*, and I think died somewhat later in the Distemper.

John Harris, I believe, was full ten Years younger than either of the preceding Patients, strong, hale, and withal a very bad Subject for the Distemper, at a more favourable Season. He liv'd pretty freely, was of a fallow, dark Complexion, of what I conceive an atrabilious Temperament, with rigid Fibres, and a very coarse Tone of Voice. I mention this last Circumstance, as I observed it, on repeated Occasions, to be one Mark of a Constitution disposed to the severer Degrees of this Malady. There was one Mr. *Peter Horry*, an eminent Merchant there, whose Complexion and Temperament greatly resembled this Person's; but a very sober Man. He had also a very hoarse Voice. I remember I asked him, if he intended to be inoculated, which he had inclin'd to, and been dissuaded from, he replied, he would take his Chance; upon which I told him, if he received a natural Infection, it would certainly seize him violently. He was taken as late as *September* or *October*, when it was much more favourable than in the former Months, and was very near, if not the very last who died of it. This natural Coarseness of Speech may probably depend on the Strength and Thickness of the
Organs,

Organs, and possibly also on the greater Plenty and Grossness of the Humours, blended with the vapid Air we emit in Respiration and Speech. However this be, the Observation is Fact, and Mr. *Harris*, I think, died the 13th or 14th Day of the Disease. His Pock was reckoned of the confluent Sort.

It may be observed, by the way, that this Person drank Water strongly impregnated with Tar, for some Time before the Infusion; a Potion recommended by one Practitioner who refused to inoculate, as a Preservative from the Infection, or Preparation from it. A great many of these Tar-drinkers sunk under a confluent Disease; and as it seemed to me a strange Antidote against, or Preparative for the Distemper, I have subjoined it with its Consequence, by way of Novelty.

Miss *Roche* was about ten Months old, a very hale plump Child, and a hoarse Pipe for an Infant. I was consulted about her Inoculation, and advised deferring it till the Fall, if they thought she could be preserved from Infection in the mean time. The Parents doubting this, and, being urged by my Colleague *Thomas Dale*, M. D. to inoculate her at all Events, it was performed the 28th of June. She sickened the 6th of July following, in a violent manner, took a little Puke, which operated four Times, and a Glyster, which produced one free Stool, after 48 Hours Costiveness. She was very tense and hot all Night; it was impossible to open a Vein: She took

a Drachm and half of *Diacodium*, and had it repeated in better than an Hour, which abated her Fever and Tension a little ; but next Morning every Thing was exasperated, and she expired suddenly in Convulsions. This Physician who translated *Lommius*, and some of the celebrated Dr. *Friend's* Works, abused my Practice on this Occasion very ungenerously in my Absence, and objected particularly to the Want of Blisters upon this acute Invasion and high Orgasm. This obliged me to a public Justification of my Conduct, and in the End produced a Dissertation, wherein I think is undeniably proved the *real* Impropriety of *Cantbarides* in the *first* Fever of the Small-Pox. For if they are ever necessary in the *first* Stage, which may possibly happen, it is always, where a Fever is absent, or defective ; in which Cases the Patient is generally rather cold, relax'd and comatose. But this by the way. It should not be omitted here, that four fine Children, all Mr. *Roche* has had, have been remarkably of a hot Disposition of Blood, all the rest expiring of Fevers, before, or about two Years old. This was the second.

OF Miss *Perroneau* I know little more than that she was a very young Child. And the *Girl* who died at Capt. *Beal's* might be about eleven Years of Age.

WITH Regard to Mrs. *Blakewey's* Wench who died, I remember she had a considerable Crop of no bad Pock, which border'd on Co-hærence. But she was in truth very irregular
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in the Disease, not from a *Delirium*, but a Sul-
lennes too common to the Colour. She open-
ed a Window that let in an easterly Wind and
Rain, and lay under it. She obtained privily
some cold, flatulent Small-beer, made of *Mol-
lasses*; and drinking plentifully of it, threw
herself into an early Looseness, about the
Height of the Disease, under which she ex-
pired. I thought, to be impartial, I could not
omit these Circumstances, but place her never-
theless to the Account of Inoculation. Of
Mrs. *Hext's* Wench who died, I only heard,
that Dr. *Dale* insured her Life for a small Ad-
vance in the Price, or offered to do it. And
these are all the Persons who died after Ino-
culation.

BUT it is farther certain, that some others,
who escaped, were hardly dealt with in the
same Season. A Lady about Forty, of a full
hale Habit, suffered a great Diminution of
Sight in one Eye. Bleeding was recommend-
ed before the Infusion, but, I think, improper-
ly neglected. A genteel agreeable young Lady
had an unhappy Blemish also in her Sight after
the artificial Disease. Another young Lady,
of a fine Complexion, being tired of a little
Confinement under a very light Infection, af-
ter looking out of an airy Window, com-
plained suddenly of a Pain in the *Axilla* of the
inoculated Side, which inflamed and suppu-
rated to a large Abscess, and prov'd strumous
at last; but has been perfectly cured since in
England. This young Gentlewoman was often
subject before to little Eruptions about the

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parotid Glands, and the Lady the Pock was taken from, visibly free from any such Disorder. A little Negro had such another Tumour, but after Suppuration, and purging, it healed very readily. Besides, where none of these Accidents occurred, many had an Eruption that might be called a moderate Confluence, viz. Mr. Benjamin Smith, Mr. Brailsford, Mr. Elisha Butler, Mr. Nathaniel Patridge, and probably half a Dozen more, I may not exactly recollect. These were all hale, adult Persons.

AND thus have I, to the best of my Ability and Apprehension, given a very just Account of every fatal, evil, or dangerous Event, that happened to the Inoculated in the Province of *South Carolina* in the Year 1738, without descending to note any other ill Consequence of the natural Disease, than its great Mortality about the same Period.

BUT with Regard to those who recovered with great Ease from the artificial Distemper, it is impossible to be exact at this Distance; and indeed it would make a large *Folio*, to give only a brief Account of their Cases. The Confinement that was judged necessary, or at least prudent, was, in Truth, the most troublesome Circumstance of it to Numbers, of which I was a continual Witness, in Cases of Patients of my own, and of other Practitioners, who, at last, one excepted, all unanimously concurred in the Practice. Whatever the very scrupulous may persist to judge of this Method,

thod, Multitudes who went thro' a commonly dreadful Disease, without Danger or Deformity, are not ashamed, with the humblest Gratitude, to attribute so useful a Discovery to the Divine Permission and Goodness; nor to consider the Use of it in *Carolina*, as a public Providence and Security. And if the Tenderness of some Persons, and Obstinacy of others, had not prevented so early and general a Use of it, as might justly be wished, there is no Doubt to be made, but the Lives of great Numbers of the Deceased might have been preserved. Neither can there be any Partiality in presuming, that the extreme Heat of the Weather might co-operate violently, towards the *Catastrophe* of those who died under the Method. For I am positive none died, who were inoculated after the Middle of *August*, tho' I am pretty certain they all expired in *June* and *July*, when the natural Disease was attended with a dreadful Carnage and Calamity indeed. And as I have already affirmed, on another Occasion, it is past a Doubt with me, whether all Persons dying under Inoculation, must not, *a fortiori*, have sunk under the natural Disease, at the same Season, and under the same physical Circumstances. It may indeed be said, that it is possible they might never be taken with it, or not at that Season, which cannot be absolutely denied: But while they were within the Sphere of a rapid Infection, I must say, it was highly improbable they should escape it long. For, supposing a few Individuals to have a natural and perpetual Protection from the Disease,

ease, Inoculation must be ineffectual on them : And that these were not such Bodies was too evident, from the high and fatal Infection they received.

I MUST think, without Prejudice, that Preparation was too often neglected with us, and at other Times, not sufficiently discriminated : And I remember particularly the Physician, who obliged me to a public Litigation at this Time, affirmed, without Exception, that it was needless. A Tenet that seems very grossly unphysical ! For that the Solids and Fluids may, by a proper *Regimen*, and a few Remedies perhaps, be reduced, from a State of greater, to less Inflammability, I must suppose as clear to every physical, every rational Person, as, that an inflammatory Disease will operate, with different Measures of Intensity, on Bodies so diversly disposed. But this Doctor's chief Ambition was to outnumber his Brethren in Patients under the Method, and particularly to exceed Dr. *Mowbray*, who happily introduced it among us. So that he neither allowed Time for Preparation, nor indeed would the mean Price he endeavoured to sink it to, afford a proper one in many Cases.

THE first Person who admitted Inoculation into her Family in *Charles-Town*, was Mrs. *Sarah Blakesway*, now living in *Cowley-street*, near *St. John's Church, Westminster*. Her two Daughters, and Miss *Baker*, a very young Lady who boarded with her, were inoculated

May

May 21. Miss *Nancy*, the eldest, being of a good Complexion for the Disease, but of a tender Constitution and Texture, was frequently low thro' the Course of a mild Disorder. Miss *Sally* and Miss *Baker* felt nothing so troublesome as the Confinement it occasioned: And the Eruptions and other Symptoms were so visibly moderate in all, that a great Majority of their Visitants were quickly cured of their Prejudices. For my own part, tho' my Sentiments were determined, after some Reflections, for the Insertion; yet, as there was at first a mighty Clamour against it, I neglected applying it at home as early as I ought; knowing it would be immediately affirmed, a Doctor wanted to extend the Disease. But having attended a near Neighbour's Daughter of three or four Years old, in a violent Confluence, of which she died in *June* (for whom, with regard to her Habit, I once mentioned Inoculation to her Mother, who was averse to it) I thought there was no Time to be lost in Ceremony; and notwithstanding it was very hot, I quickly inoculated my Son between ten and eleven, and my Daughter between six and seven. Of two other Boys, who took it naturally too early for me, the youngest a weakly Child, about two Years old, expired. My Son had a smart Fever before Eruption, and a considerable Crop of the distinct Kind. My Daughter, of a much lighter Complexion, I believe scarce 40, complaining of nothing but a little Giddiness at the Invasion, and never keeping her Bed for it. In brief, as I have already said, there would be no End of re-
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citing the Cases of those only, who recovered in a very easy, unloathsome Manner. The very Lift would be tedious and swelling; and without any Injury to Truth, it may be affirmed, they were 19 Twentieths of those who admitted the Operation.

THERE were five of the Inoculated who never were affected by the Infusion. Mr. *Robert Raper*, born in *Yorkshire*, and about 30 Years old, was inoculated by Dr. *Burleigh* without Effect. Having a dreadful Apprehension of the natural Disease, after three Weeks or a Month from the first Operation, he received fresh Matter as ineffectually. I frequently saw this Patient, in Company with his Physician. There was very little Inflammation, or Discharge from the Orifice. He was purged, and the Incisions heal'd readily; and during three Years after that I remained in *Carolina*, he continued as healthy as any other Person in it.

Dr. *Mowbray* inoculated a Negro Carpenter of Mrs. *Watson's*, who, he informed me, was not infected. This Fellow had formerly been very subject to *yaw* Impurities, and was of a gross Habit. He had been often physick'd, and once salivated, on account of such Humours; and receiving an ugly transverse Cut with an Adze, near the great Tendon, about which I was concerned, the Cure was not accomplished, without considerable Alterations and Depletions by *Mercury* and Diet-drinks. Now whether these repeated cuticular Dif-

Discharges, and the plentiful Exhibitions of that powerful Mineral might not expel, or extinguish the very *Seminum* of this Disease, supposing him never to have had it in *Africa*, is a Speculation I shall submit to better Physicians and Theorists than myself. The Fellow was purged, the Incisions heal'd, and I left him well in the Province.

I inoculated a Negro Boy of Major *Pinckney's* who did not take. He had no manner of Complaint from it, was purg'd, and the Incision healed. He continued as healthy as ever after it.

I ALSO inoculated Mr. *Corbett's* Boy, *Lambeth*, to as small Purpose. He never had the least Complaint, or Inflammation about the Orifice. However, I purged him, and he continued as well as ever, while I remained in the Province. This Lad had naturally a very fluid Blood, and a thin loose Surface, being subject, and chiefly in Summer, to profuse and frequent *Hæmorrhages*. Probably such a State of Blood, and their simple way of Living, in general, would have made him an easy Subject for the Disease; his Fluids being of that *Crafsis* which I conceive *Sydenham* means by his *Ευμελαχολας*, and considers as the happiest Temperament for this Disease. A fibrous cohesive Blood, and analogous Texture of the Solids, being the Habits it affects, *cæteris paribus*, most violently. I inoculated a Girl of Mrs. *Gittens* at the same Time and Place, and with the same Matter, who sickened

ened very regularly, and had a moderate Disease.

I have heard that Mr. *John Daniel* of *Daniel's Island*, inoculated a valuable Slave twice, without Effect, or ill Consequence. And these are all upon whom the Operation was vainly celebrated.

Mr. *Raper* said he remembered his Mother to have said, he had not the Disease. The Negroes, to the best of my Recollection, were all born in *Africa*, so that none could absolutely say, if they ever had a few or not. It was certainly thought probable they had none. Their Complexion, in Reality, makes the smallest Traces of this Disease less discernible than ours; and as they are subject to a greater Number of eruptive Diseases, and cuticular Foulnesses than we are, a slight Pit or two, that look'd like the Small-pox, was less credited: And some were inoculated, where it was doubtful, lest they should not have had it, and from an Expectation, that it would not hurt them, tho' it failed. And it was manifest it did not. Now whether these were privileged thro' a peculiar Habit or Idiosyncrasy, perpetual, or only temporary, as we sometimes observe in the natural Disease; or by a former very gentle Infection, is not easily investigable; and like many other investigable Things, may be a Matter of at least as much Curiosity as Consequence; tho' it may have been material to shew, the Operation was harmless, where it was ineffectual; as I left them

them all well and hearty, above three Years after it, in a Country less generally remarkable for Health and Longevity than *Great Britain*. And undoubtedly had any of them died a natural Death, of whatever Disease, a Year after it, some would have been weak enough to charge it to the Infusion; as if it was to be condemn'd for not preventing all other Diseases, or, in effect, for not immortalizing the Subjects of it.

WITH REGARD to a second Infection of the Inoculated *who took*, this was asserted once by some who wished for it, but as soon refuted, tho' the Inoculated, after Recovery, never hesitated to visit any of the Infected; and besides, there was a very remarkable Experiment made by a very young Lady on herself, on this Account. Miss *Baker*, a Lady mention'd as inoculated with Miss *Blakewey*, was about twelve Years old. As they had all been very favorably infected, some of their Visitants used to say, from Opinion or Prejudice, that they would have it again, it having gone no deeper than their Skins, as those pretty Philosophers commonly express'd themselves. A Neice of Mrs. *Blakewey's* being afterwards inoculated, and lodging at her House, when her mild Pock was ripe, Miss *Baker* proposed to the youngest Miss *Blakewey*, to take fresh Matter from Miss *Logan*, and inoculate themselves a second time; for she said she was quite fretted with People's telling them, they should have it again; and was resolved to discover the Truth of it. Miss *Blakewey*, who did not venture it herself, yet assisted Miss *Baker* to come
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privately by the Matter. She made a fresh Incision with a Penknife herself, and to make sure Work, applied fresh Matter three successive Mornings, which was more than usual or necessary. These very young Ladies contained the Secret effectually, till about eight Days after, when Miss *Baker* complaining of a Head-ach, being somewhat feverish, and frightened with the Effects of her own Resolution, they revealed the whole Process. She continued heavy and disorder'd the best Part of the Day on the Bed, but towards Evening she got up, and saying, with a resolute Chearfulness, very natural to her, *She would be sick no longer*, kept her Word effectually, like a young Lady of Honour, as well as Courage and Curiosity. She never had the least Eruption or Complaint afterwards.

SOME Persons were of Opinion, that the Pock of the Inoculated would be too mild to convey the Disease; or, at least, that it must become effete by a second or third Transplantation. Experience manifested the contrary. I have inoculated from those, who were infected by the Matter taken from others of the Inoculated, and found no Defect. Mr. *Mowbray*, who inoculated many more than any other Practitioner, assured me, he had infused Matter in the fifth or sixth Succession from the natural Pock, and observed no Difference. I inoculated a young Lady and her Brother from a good natural Pock, tho' pretty contiguous, and I believe there were not above a hundred between them; so that the Condition of the Recipient,

Recipient, as Reason itself must suggest, was the grand Circumstance. The smallest Violation of the Surface, if it was stained with Blood, was a sufficient Entrance for the Matter, and the least Matter sufficient. A Gentlewoman who had scratch'd her Finger, apply'd a Pock to it from another, or one of her Children, whom she often visited in the Disease; so that it is not certain in which manner she received the Infection: However she had certainly a full Cohærence, and was indeed a bad Subject for the Distemper, which yet she got very well through. Assisting Dr. Dale to inoculate Mr. *Vanvoelsens's* Family, one of his People had a pretty deep Issue: We put a little infected Lint into it, and he received a very moderate Disease.

AND now having seen such numerous Instances of this Practice, as I think have enabled me to form some Judgment of it, I beg Leave to reply a little to that Objection, which supposes the Probability of infusing other Diseases, with the Matter that gives the Pock. I do not in the least accuse any Person for the greatest Caution and Tenderness in every Circumstance relating to Health; nor did I incline to this Method myself, without such a Reflection on it, and the Objections to it, as my indifferent Abilities afforded me. But Objections from Persons of Reputation and Capacity should answer to the Dignity of their Characters; they should be first well weighed, in Proportion to the Influence they may naturally impress; and Fancies that might enliven a Paper

of Entertainment, may be of too light a Composition, even to diversify such, as are conversant on Life or Health, or devoted to serious Utility. The Seeds or Principles of contagious Diseases, I conceive to be as distinct as the Seeds of Plants, which may be placed in such different Soils, as may either dispose them to Luxuriance, or even prevent their Germination; tho' we cannot by any Art or Compost make a Pippin produce a Cabbage. The Matter of the Pock, however produced, we find effectual, in the smallest Quantity, to convey the same Disease that effected it: And if it were to communicate any other, it ought naturally to have been united with what it is apprehended it may communicate. But I may be answer'd, that it is not suppos'd the Pock shall, with itself, impart the Plague, Measles, or any other contagious Disease, but some hereditary or contracted Disorder of the Person it was taken from. This I could never suppose for the following Reasons: Hereditary Diseases do not only imply that they may be imparted, but the Expression, methinks, ascertains the only Manner in which they are, that is, as they were received, by Consanguinity, or Propagation, strictly. If they have been the unwelcome Legacy of the Male Parent, we may consider them as the Consequences of an extraordinary Infusion indeed; but of a peculiar Fluid, secreted from, and compounded of all the Humours, probably affected with their connate, or contracted Qualities, good or bad, but still visibly homogeneous, nor so sensibly perverted in its Texture and Substance, as

Blood

Blood variolated into *Pus*; in which Case, whatever Evil it might produce, it could never fulfil the natural Intentions of Fecundity and Vivification. And if we suppose the Disease, which is to be *confused* with the Pock, (as I may express it, in a particular Sense,) to descend from the Mother, we are to consider the Person hereditarily afflicted, as one partly generated from her Substance, and solely nourished by her Blood and Humours, in their ordinary State, for many Months: A Situation, which, without any Arguments, may at once be concluded to impress such a Disposition to the Disorders her Juices are propense to; as can scarcely be received afterwards from another Person. And supposing this *confusable* Disease contracted by the Party to be infused from, the Argument is similarly applicable and extensive. For the *Pus* here can no longer be considered as Blood, in which a Disposition to other Diseases might reside; but as a peculiar Corruption of it by the variolous Cause; which, if it might assimilate such disposing Particles, must subdue them to its own Nature, and in some Proportion to the evident Alteration of their Vehicle; from which Change of Figure and Texture, their Effect or very Essence must cease, as such; if it be as true as probable, that all Bodies operate mechanically, and in Consequence of them. I suppose it unnecessary to say any thing of such Diseases as are justly termed *Errores loci*, since it may be as reasonable to suppose the Infusion of a Hump-back, or a Dislocation, as of them. And yet such is the Rage or Whim of Opposition,

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that after the remote and fantastical Objections I have been forc'd to listen to, I should not be excessively astonished, if some were delicate enough to be jealous of inoculating from a different Sex, for fear of compounding a Hermaphrodite.

THE ill Consequences attributed to Transfusion seem improperly, or unfairly forced in against Inoculation: Since in the former a large Quantity of actual Blood is suddenly infused, which, however seemingly better qualified in itself, yet, *quoad hunc*, not having been factured or elaborated by his individual Organs, may have a *Crisis* no ways analogous to the Tone of his Solids, improper to correspond with the Orifices of his Strainers, or to afford the precise Quantity or Quality of Spirits, requisite to the regular Information and Oeconomy of his particular Machine; whence very surprizing *Phænomena* may arise. In short, the *Lues* begets the same; the Bite of a mad Dog an astonishing Resemblance of the same Madness even in Mankind; every Thing generates its Likeness; and what is little short of a thousand Arguments, in near as many Instances, we never saw the Pock communicate any thing but itself, or such Effects as ordinarily attend it. Notwithstanding all which, I am entirely of Opinion, that the most unexceptionable Body, and most laudable kind of Pock should be ever carefully preferred for this Operation, as well from Motives of Prudence, as from a Reflection on the Shallowness of all human Science, and the very Possibi-

Possibility of such Accidents as have not occur'd hitherto.

WITH Regard to the most successful Practice in this Disease, the temperate or cool *Regimen*, which I suppose generally prevails, was certainly found such in *Carolina*; notwithstanding a great deal of Mischief was done among us, by the præmature and preposterous Use of Blisters in the *first Stage* of it; than which there certainly cannot be a more absurd and irrational Practice, in that Climate and Summer at least. A great Instance of the Benefit of free Air, in the severer Degrees of it, occur'd with us, and has a great Resemblance to the History Sydenham gives of what happened to a variolous Patient, laid out for Dead, at *Bristol*. Mr. Benjamin Mazyck had a violent natural Confluence in the hot Weather. I saw his Physician at the Door, and asking him, what he thought of him, he replied, He was gone: I understood him, *already dead*; and indeed his Attendants thought so too: Upon which, the Sashes of the Room, which were shut before, were immediately set open; and a fresh Quantity of Air, or possibly a Wind rushing in, produced a fresh Respiration and Motion in the Person who was thought dead. When this was observed, they went to put them down again. The Patient, who saw it, and was speechless, but sensible of the Alteration and Benefit, beckoned with his Hand to prevent them, and by Degrees entirely recovered.

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Charles-Town, the unfortunate Capital of this Province, was visited the following Year with a bilious Fever, which was probably imported from *Africa*, or the *Caribbean-Islands*; and I am very apt to think is the same Disease that seems to be endemic with them, and is so fatal to *Europeans* arriving there. This destroyed many, who had got thro' the Small-pox, and was strangely aggravated by the most burning *Regimen* and Remedies, if they could be called such, that Infatuation could devise. A Bleeding and Diluents, Acids and Refrigerants were condemned as Poisons. The Body was immediately half covered with Blisters and their Bandages; burnt Wine, hot Runch, and strong Juleps were taken to *keep up the Spirits* as the Phrase was; and to allay the violent Thirst and Heat, which themselves, and the parching Bolusses that accompanied them, had produced, or increas'd. The Patients generally burst into Hemorrhages from different Parts, and, a premature Jaundice appearing, died the third, fourth or fifth Day. No rational Physician will be surprized to hear, that five in six expired under such Management, however strange the Recovery of any may seem to him. The same Proportion that died under this Conduct, recover'd, by premising and sometimes repeating Bleeding, Vomiting with plentiful Dilution, small Ptisans acidulated with simple *Oxymel*, light Tea, thin Beverage with Limes, roasted Water and the like; absolutely forbidding all Blisters, and stimulant Medicines, at least in the Begin-

Beginning and Increase of the Disease. Of four, all who died under this Treatment, one reach'd the 13th, the rest the 8th Day from Invasion. In short, it did not look like the same Disease; the cool, opening Method keeping off any considerable Yellowness, till the 6th or 7th Day, its Appearance about which Term commonly dissolv'd the Disease. As the Bile was very redundant and hot here, not being duly secreted from the Blood, Acids were of the greatest Service; and the Patients were sensible of very grateful Revivings, from the Room's being frequently sprinkled in the Heat of the Day with the *sharpest Vinegar*. In short, in the bilious Fevers these hot Climates are liable to, Acids and Diluents are the grand Correctors and Remedies; and indeed Nature has not furnished them with such continual Plenty and Variety of acid Fruits to no Purpose. Wou'd Practitioners attend properly to her, she points out these great Remedies herself in these Fevers. The Redundance of Bile creates a frequent Thirst, and the Sapour of those Fruits is a sensible Cordial to the Patient. But when a violent Co-operation with the Cause of an acute Disease is preferred to a judicious Restraint and Moderation of its Effects, what Regard is paid to the Divine *Creator's* *Instructions*? And indeed it may be affirmed, without the least Extravagance, that a very few Grains of *Sublimate*, had a better Right to be considered as a Remedy, in the Beginning of this Fever, than the Medicines, that in spite of common Sense, and continual Experience,

rience, were then recurr'd to as such. Yet must it be acknowledged, that Persons who wander thus unaccountably from Nature, are the more pardonable, as they are generally the least indebted to her. Nothing appears scientificall to them, without an Air of Remoteness and Obscurity. They neglect Daylight, to pursue the Delusions of an *Ignis fatuus*; and overlook her noble Simplicity, to worship the Perplexities of a bewilder'd Imagination.

THIS indeed is a plain Digression from the professed Subject of these Sheets. But as I lately met with some unintelligible Complaints against the Use of *Vinegar* and *Acids*, in such Fevers and Climates, and clearly saw such Phantasies defeated by a Multitude of Facts: And farther observing, that the *Cantharides* were also supposed to *thicken* the Blood, when I had lately seen above a hundred mortal Instances of their *dividing* and *dissolving* it; I judg'd the mentioning those Facts, in Opposition to such noisy Dreams, a Debt to Truth and to Justice. But to return and conclude with Inoculation.

WHEN I talk of Children as the easiest Subjects in general for this Disease, and of Course for this Operation, I can only intend that they are commonly invaded with the mildest Degree of it; for the great Majority of Deaths, under the Age of two Years, are a sufficient Demonstration, if any was necessary, that their Portion of vital Strength

is too frequently inferior to any violent Assault. And thus have I, in as succinct a Manner as I thought consistent with the Perspicuity of a Relation of this Kind, given a strict Account of the Effects of Inoculation in *South Carolina*, the great Truth of which I hope will atone for the small Embellishment. I think I am by no means concluded, because my first Sentiments were favourable to the Method; for had the Events contradicted them, I should have thought it some Merit to acknowledge my Delusions; but I confess I have great Satisfaction, if not a Pride in its Success; which yet I hope has made me rather a rational than a bigotted Admirer of it. I have mentioned whatever I knew or heard of, that could discountenance it, *particularly*, its good Effects in *general*; and have considered myself as writing rather *concerning*, than *for* or *against* it. Let it be examined with Justice, and if, upon the fairest Trial, Truth declares of its Side, the Advantage is in Favour of Mankind, and *Philanthropy* must rejoice in the Verdict.

FOR my own Part, I protest, that upon reading and revolving on this Subject, none of the physical Objections to Inoculation appear'd to my Apprehension argumentative or strong, and the most plausible only witty or Ingenious. And I have found so little Occasion to repent what I once occasionally asserted of it, that I shall repeat it here as certain and evident. *As the most essential Excellence*
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of Physicians the Preservation of human Life; and as many certainly have, more might have been, and many may be preserved by Inoculation; for a Man may safely challenge the Science to show, that any Method or Medicine has yet been discovered that warrants the same rational Advantage and Security to a Patient, in a Disease equally popular and dangerous, which a judicious Inoculation does to the Subjects of the Small-pox. And undoubtedly it was not without the maturest Reflection on this cruel Distemper, that the great Boerhaave, hinting the general Inefficacy of Medicine in its severest Heights; from whence he says, as many as recover, emerge by the mere Force and Wisdom of Nature; *Nemo nisi sponte emergit*, concludes with his Opinion of this Method in the following Terms, *Prophylaxis insitua satis certa tutaque videtur*, Apborism. 1403, Leyden Edition 1728; which may be rendered thus: The Prevention of inoculating seems sufficiently certain to communicate the Disease, and to procure a happy Issue of it.

E I N I S.

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E R R A T A.

Page 16, Libr 15, for *then* read *taken*; p. 19, l. 31, for *Eruption* read *Eruptions*; p. 30, l. 12, for *from it* read *for it*; p. 45, l. 17, for *Neighbour's* read *Neighbour's*. Preface, p. 6. l. 8. for *Temperature* read *Intemperature*.

